Appl. No. 10/532,927
Amendment and/or Response
Reply to Office action of 8 September 2006

Page 7 of 11

REMARKS / DISCUSSION OF ISSUES

Claims 1-10 are pending in the application.

The applicants thank the Examiner for acknowledging the claim for priority and receipt of certified copies of all the priority documents, and for determining that the drawings are acceptable.

Claims are amended for non-statutory reasons: to correct one or more informalities, remove figure label numbers, and/or to replace European-style claim phraseology with American-style claim language. The claims are not narrowed in scope and no new matter is added.

The Office action objects to the Abstract; a replacement Abstract is included herein.

The Office action rejects claims 1, 3, 5, and 6 under 35 U.S.C. 112, second paragraph. The applicants respectfully traverse this rejection, and respectfully request the Examiner's reconsideration of this rejection in view of the claims as amended herein.

The Office action rejects claims 1-10 under 35 U.S.C. 103(a) over Guha (USP 5,699,369) and Kang (USP 6,615,382). The applicants respectfully traverse this rejection.

The Examiner's attention is requested to MPEP 2142, wherein it is stated:

"To establish a *prima facie* case of obviousness ... the prior art reference (or references when combined) ***must teach or suggest all the claim limitations*** ... If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness."

In independent claim 1, the applicants claim a transmission system that includes a receiver that analyzes packet errors to determine an optimal amount of redundancy, and communicates the optimal amount of redundancy to a transmitter for use by an encoder that provides the redundancy.

Appl. No. 10/532,927
Amendment and/or Response
Reply to Office action of 8 September 2006

Page 8 of 11

In independent claim 4, the applicants claim a receiver that includes an analyser for analysing packet errors and for determining an optimal amount of redundancy, and a feedback device that is configured to feed back the optimal amount of redundancy to a transmitter.

In independent claim 7, the applicants claim a transmitter that includes an encoder for generating redundancy packets that sets the amount of redundancy to an optimal value that is fed back to the transmitter by a receiver based on prior transmissions from the transmitter.

In independent claim 9, the applicants claim a method that includes analysing packet errors at a receiver, determining an optimal amount of redundancy at the receiver, and communicating the optimal amount of redundancy from the receiver to a transmitter.

Neither Guha nor Kang teaches or suggests determining an optimal amount of redundancy at a receiver and communicating this optimal amount to a transmitter, as claimed in each of the applicants' independent claims.

The Office action asserts that Guha teaches a receiver comprising an analyzer for analyzing packet errors and for computing an optimal amount of redundancy at FIG. 7 and column 21, lines 9-56. The applicants respectfully disagree with this assertion. The applicants note that Guha's FIG. 7 describes a process that is performed at the transmitter, and not at the receiver. At column 10, line 53 – column 11, line 6, Guha describes a sequence at a transmitter that corresponds to FIG. 7, and then subsequently describes the operations at the receiver, at column 11, lines 7-19. The cited text at Guha's column 21 describes the algorithms used for determining estimated burst errors in a transmission, and does not relate to functions that are applied at a receiver.

The Office action acknowledges that Guha does not teach feeding back an optimal amount of redundancy to a transmitter, and asserts that Kang provides this teaching at column 7, line 31, through column 8, line 31. The applicants also respectfully disagree with this assertion. At the cited text, Kang teaches that it would

Appl. No. 10/532,927
Amendment and/or Response
Reply to Office action of 8 September 2006

Page 9 of 11

be desirable for the receiver to estimate the state of the transmission channel, but notes that such an approach is difficult, and therefore, in Kang, the transmitter estimates the state of the channel:

> "It is necessary to estimate the state of the channel in order to use the adaptive error controlling method in accordance with the state of the channel. It is ideal that a cell receiver estimates the state of the channel and informs a transmitter of the state of the channel without errors. However, it is difficult to guarantee the reliability of feedback information in the wireless channel and it is difficult for the transmitter to rapidly react when the state of the channel fluctuates or high speed data is transmitted.
>
> Therefore, in the embodiment of the present invention, a method, where the transmitter estimates the state of a forward (a direction from which the transmitter transmits a cell) channel through the state of a backward (a direction to which the transmitter receives a cell) channel, is used." (Kang, column 7, lines 31-45.)

That is, contrary to the Office action's assertion, Kang specifically teaches that the transmitter determines a state of the channel from which to adaptively control an error correction scheme, and not the receiver, as taught and claimed by the applicants.

Because both Guha and Kang fail to teach or suggest determining an optimal amount of redundancy at a receiver and communicating this optimal amount to a transmitter, as claimed in each of the applicants' independent claims, the applicants respectfully maintain that the rejection of claims 1-10 under 35 U.S.C. 103(a) over Guha and Kang is unfounded, per MPEP 2142.

Additionally, the Examiner's attention is requested to MPEP 2143, wherein it is stated:

> "THE PRIOR ART MUST SUGGEST THE DESIRABILITY OF THE CLAIMED INVENTION ... The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). ... The mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)".

Appl. No. 10/532,927   Page 10 of 11
Amendment and/or Response
Reply to Office action of 8 September 2006

There is no suggestion in the prior art to combine Guha and Kang.

Guha teaches adjusting the amount of redundancy in a transmission based on a determination of whether it is feasible to add such redundancy; if sufficient redundancy can be added to overcome anticipated burst errors, it is added, otherwise, no redundancy is added (Guha's FIG. 7).

Kang teaches continuously adjusting the amount of redundancy in a transmission based on the state of a channel from a receiver to a transmitter.

The criteria of Guha and Kang for adjusting the amount of redundancy are uniquely different from each other, and the adoption of one implies the rejection of the other. That is, there is no 'combination' of these references with regard to adjusting the amount of redundancy; one is an all-or-nothing threshold test, the other is a continuous adjustment. If Kang's continuous-adjustment teachings are adopted, Guha's all-or-nothing teachings must be abandoned, and if Guha's all-or-nothing teachings are adopted, Kang's continuous-adjustment teachings must be abandoned.

The Office action asserts that the combination of Guha and Kang would be obvious in order to:

> "provide a method for controlling errors in a link layer using a simultaneous multiple copy scheme and an adaptive forward error control scheme, which is capable of satisfying quality of service such as cell propagation delay time and a cell loss ration for a real-time service as well as a non-real time service in a wideband wireless communication" (Office action, page 4, lines 5-8).

The applicants note that the above is a replication of the object of Kang's invention (Kang, column 2, lines 53-59). The cited text is a motivation for using Kang's continuous-adjustment approach, and either has no relevance regarding Guha's teachings, or is motivation to abandon Guha's teachings in favor of Kang's teachings.

Because the prior art fails to suggest combining Guha and Kang, and because the teachings of Guha and Kang appear to be mutually exclusive alternatives to a common problem, the applicants respectfully maintain that the rejection of claims 1-10 under 35 U.S.C. 103(a) over a combination of Guha and Kang is unfounded, per MPEP 2143.

Appl. No. 10/532,927
Amendment and/or Response
Reply to Office action of 8 September 2006

Page 11 of 11

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Robert M. McDermott, Esq.
Registration Number 41,508
Phone: 804-493-0707
Fax: 215-243-7525

Please direct all correspondence to:
Yan Glickberg, Esq.
Philips Intellectual Property and Standards
P.O. Box 3001
Briarcliff Manor, NY 10510-8001
Phone: (914) 333-9618
Fax: (914) 332-0615